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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARY L. ELLIS

Appeal 2016-001720
Application 13/134,229
Technology Center 2800

Before CHUNG K. PAK, DONNA M. PRAISS, and
MICHAEL G. McMANUS, *Administrative Patent Judges*.

McMANUS, *Administrative Patent Judge.*

DECISION ON APPEAL

The Examiner finally rejected claims 1–15 and 17–20 of Application 13/134,229 ("the '229 Application") under 35 U.S.C. § 103(a) as obvious. Final Act. 2–5. Appellant[1] seeks reversal of these rejections pursuant to 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6.

For the reasons set forth below, we AFFIRM.

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[1] Mary L. Ellis is identified as the real party in interest. Appeal Br. 3.

BACKGROUND

The '229 Application relates to a lighting system including an illuminated mirror configured so that one may adjust the color temperature and intensity of the light. Spec. 3. The lighting system is intended to provide an improved illumination for use with mirrors in retail dressing rooms. *Id.* at 3.

Claim 1 is representative of the '229 Application's claims and is reproduced below from the Claims Appendix to the Appeal Brief:

> 1. A system comprising:
>
> an elongate reflective surface and
>
> at least one light source disposed in close proximity to said surface, said light source including: an array of light emitting diodes and a diffuser in optical alignment with said diodes,
>
> said light source being optimized to deliver a light output in the range of 20 to 50 foot-candles at a range of 4 feet from the surface of the mirror with a color rendering index of at least 90 at a temperature of 2700 – 3500 degrees Kelvin.

Appeal Br. 10 (Claims App.).

REJECTION

On appeal, the Examiner maintains the following rejections:

1. Claims 1–10, 12–15, 17, 18, and 20 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Meuller et al. (US 7,572,028 B2, iss. Aug. 11, 2009) (hereinafter "Mueller") in view of Roberts et al. (US 2008/0225512 A1, pub. Sept. 18, 2008) (hereinafter "Roberts"). Final Act. 2–5.

3. Claims 11 and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Mueller and Roberts and further in

view of Lynch et al. (US 2009/0086488 A1, pub. Apr. 2, 2009) (hereinafter "Lynch"). *Id.* at 5.

DISCUSSION

The Examiner rejected claim 1 over Mueller in view of Roberts. Final Act. 2–4. Appellant argues that neither of these references, taken alone or in combination, teach or suggest a mirror system with a light source optimized to deliver a light output in the range of 20 to 50 foot-candles at a range of 4 feet from the surface of the mirror with a color rendering index of at least 90 at a temperature of 2700 – 3500 degrees Kelvin. Appeal Br. 6.

The Examiner finds that Mueller teaches adjusting LED light output to obtain light with color temperatures of 2300 – 4500 degrees Kelvin and a color rendering index (CRI) above 80. Final Act. 3; Answer 4. The Examiner further finds that light output and CRI are result-effective variables. *Id.* The Examiner additionally takes official notice "that these ranges are obvious and known light output ranges." Final Act. 3. In support of such official notice, the Examiner cites to Clemente (US 6,969,379), Kit (US 7,507,001), and McGrath (US 2009/030720). Final Act. 3; Answer 5.

Appellant asserts that "there is no evidence in the art that the claimed parameters have been recognized in the art as **result-effective variables**." Appeal Br. 7 (emphasis in original). "A recognition in the prior art that a property is affected by the variable is sufficient to find the variable result-effective." *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012). "In cases in which the disclosure in the prior art was insufficient to find a variable result-effective, there was essentially *no* disclosure of the

relationship between the variable and the result in the prior art." *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012) (emphasis in original).

In regard to color temperature, Mueller teaches as follows:

> The color temperature of viewing light depends on the color content of the viewing light as shown by line (104) [of Fig. 1]. Thus, early morning daylight has a color temperature of about 3,000 K while overcast midday skies have a white color temperature of about 10,000 K. A fire has a color temperature of about 1,800 K and an incandescent bulb about 2848 K. A color image viewed at 3,000 K will have a relatively reddish tone, whereas the same color image viewed at 10,000 K will have a relatively bluish tone. All of this light is called "white," but it has varying spectral content.

Mueller 2:24–33. Thus, Mueller teaches a relationship between color temperature and light spectral content. Mueller also includes a lengthy explanation of color rendering index. *See id.* at 2:34–63. That explanation indicates, inter alia, that

> the CRI is scaled so that a perfect score equals 100, where perfect would be using a source spectrally equal to the reference source (often sunlight or full spectrum white light). For example a tungsten-halogen source compared to full spectrum white light might have a [CRI] of 99 while a warm white fluorescent lamp would have a CRI of 50.

Id. at 2:51–56. Accordingly, Mueller also teaches that color rendering index affects light output. Indeed, Mueller specifically discusses color temperature and CRI in the context of LED dressing room lighting. *Id.* at 32:40–59. In this regard, Mueller recognizes that dressing room

> lighting conditions are, many times, sub standard or at a color temperature and/or CRI that does not match the setting where the article will actually be put to use by the customer once purchased

> (e.g., the outdoor party next Saturday). So, the customer is left to make the decision without optimal lighting conditions. . . . A system according to the present invention would allow, the customer to change the lighting conditions (e.g., via a user interface 3510) and view the article under the lighting conditions that are of primary concerns to this particular user.

Mueller 32:46–52.

Further, the Specification suggests that the parameters at issue are result-effective variables:

> the light output may vary from an **optimal range** of 20 fc to 50 fc, as appropriate for the lighting effect desired assuming a user will be standing anywhere from a minimum of two (2) ft to a maximum of approximately seven (7) ft from the unit, totally depending on the size of the space. This relates to **tunability**. **One of ordinary skill in the art can determine the best setting based on the requirements of a given application**.

Spec. 6 (emphasis added). Terms such as "optimal range" and "tunability" indicate that discovering the optimum or workable ranges involves only ordinary skill in the art.

In view of Mueller's teachings regarding light output, color temperature, and CRI, the Appellant has failed to show error in the Examiner's finding that color temperature and CRI are result-effective variables.

CONCLUSION

For the reasons set forth above, we affirm the rejection of claims 1–15 and 17–20 of the '229 Application as obvious.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED